

Patent claims

1. A molding encompassing a composite layered sheet or composite layered film, reverse-coated with a backing layer of plastic applied by an injection-molding, foaming, casting, or compression-molding method, where the composite layered sheet or composite layered film encompasses
- (1) a substrate layer comprising, based on the total of the amounts of components A and B, and, if appropriate, C and/or D, which give 100% by weight in total,
- a from 1 to 99% by weight of an elastomeric graft copolymer as component A,
- b from 1 to 99% by weight of one or more hard copolymers containing units which derive from vinylaromatic monomers, as component B,
- c from 0 to 80% by weight of polycarbonates, as component C, and
- d from 0 to 50% by weight of fibrous or particulate fillers, or a mixture of these, as component D, and
- (3) a top layer comprising an aliphatic thermoplastic polyurethane.
2. The molding according to claim 1, wherein the thickness of the top layer (3) is from 10 to 500 μm and the thickness of the substrate layer (1) is from 50 to 1500 μm .
3. The molding according to claim 1 or 2, wherein the modulus of elasticity E_t (measured to ISO 527-2/1B at 5 mm/min at a temperature of 100°C) of the substrate layer (1) is at least 1000 MPa.
4. The molding according to any of claims 1 to 3, wherein, between the top layer (3) and the substrate layer (1) there is a colored intermediate layer (2) comprising aliphatic thermoplastic polyurethane, impact-modified polymethyl methacrylate, polycarbonate, or styrene (co)polymers.
5. The molding according to claim 4, wherein the thickness of the intermediate layer (2) is from 50 to 500 μm .
6. The molding according to any of claims 1 to 5, wherein there is an adhesion promoter layer on that side of the substrate layer (1) facing away from the top layer (3).
7. The molding according to claim 6, wherein the thickness of the adhesion promoter layer is from 10 to 300 μm .

8. The molding according to any of claims 1 to 7, wherein the layer thickness of the composite layered sheet or composite layered film is from 110 μm to 2.8 mm.
- 5 9. The molding according to any of claims 1 to 8, wherein the surface gloss of the top layer (3) measured to DIN 67530 at observation angles of both 20° and 60° is above 80 units.
- 10 10. The molding according to any of claims 1 to 9, wherein the aliphatic thermoplastic polyurethane present in the top layer (3) has a Shore D hardness of from 45 to 70.
- 15 11. The molding according to any of claims 1 to 10, wherein component B contains, based on the total weight of units derived from vinylaromatic monomers, from 40 to 100% by weight of units derived from α -methylstyrene and from 0 to 60% by weight of units derived from styrene.
- 20 12. The molding according to any of claims 1 to 11, wherein component A comprises
 - a1 from 1 to 99% by weight of a particulate graft base as component A1, obtainable by polymerizing, based on A1,
 - a11 from 80 to 99.99% by weight of at least one C_1 - C_8 -alkyl acrylate, as component A11,
 - a12 from 0.01 to 20% by weight of at least one polyfunctional crosslinking monomer, as component A12,
 - 25 a2 from 1 to 99% by weight of a graft A2 obtainable by polymerizing, based on A2,
 - a21 from 40 to 100% by weight of styrene, of a substituted styrene, or of a (meth)acrylate, or of a mixture of these, as component A21, and
 - a22 up to 60% by weight of acrylonitrile or methacrylonitrile, as component A22,
 - 30 where the graft A2 is composed of at least one graft shell, and the graft copolymer has a median particle size of from 50 to 1000 nm,
 - and component B comprises copolymers of
 - 35 b1 from 40 to 100% by weight of vinylaromatic monomers, as component B1,
 - b2 up to 60% by weight of acrylonitrile or methacrylonitrile, as component B2.
- 40 13. The molding according to any of claims 1 to 12, wherein component A comprises

- 5 a1' from 10 to 90% by weight of at least one elastomeric graft base with a glass transition temperature below 0°C, as component A1', obtainable by polymerizing, based on A1',
 a11' from 60 to 100% by weight of at least one conjugated diene, as component A11',
 a12' from 0 to 30% by weight of at least one monoethylenically unsaturated monomer, as component A12', and
 a13' from 0 to 10% by weight of at least one crosslinking monomer having unconjugated double bonds, as component A13',
 10 a2' from 10 to 60% by weight of a graft, as component A2', made from, based on A2',
 a21' from 50 to 100% by weight of at least one vinylaromatic monomer, as component A21',
 a22' from 5 to 35% by weight of acrylonitrile and/or methacrylonitrile, as component A22',
 15 a23' from 0 to 50% by weight of at least one other monoethylenically unsaturated monomer, as component A23',
 and component B comprises copolymers of
 20 b1' from 50 to 100% by weight of vinylaromatic monomers, as component B1',
 b2' from 0 to 50% by weight of acrylonitrile or methacrylonitrile or a mixture of these, as component B2',
 b3' from 0 to 50% by weight of at least one other monoethylenically unsaturated monomer, as component B3'.
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14. The molding according to any of claims 1 to 13, wherein the backing layer comprises glass fibers or other reinforcing fibers.
- 30 15. A process for producing a molding according to any of claims 1 to 14, which comprises irreversibly bonding all of the layers of the composite layered sheet or composite layered film to one another in the molten state in a coextrusion process.
- 35 16. The process according to claim 15, wherein the layers are brought together in an adaptor die or in a coextrusion die.
- 40 17. A process for producing a molding according to any of claims 1 to 14, which comprises irreversibly bonding one or more layers of the composite layered sheet or composite layered film in a laminating process in a heated nip.

18. A process for producing a molding according to any of claims 1 to 14, which comprises thermoforming the composite layered sheet or composite layered film, and then inserting it into a reverse-coating mold, and then reverse-coating with thermoplastic molding compositions, using an injection-molding, casting, or compression-molding method, or reverse-coating with thermoset molding compositions, using a foaming or compression-molding method.
19. The process according to claim 18, wherein, prior to insertion into the reverse-coating mold, the composite layered sheet or composite layered film undergoes a profile-cut process.
20. The process according to claim 18, wherein, after removal from the reverse-coating mold, the composite layered sheet or composite layered film undergoes a profile-cut process.
21. The use of the moldings according to any of claims 1 to 14 for application in the motor vehicles exterior sector, in particular for roof modules, engine hoods, wheel surrounds, bumpers, door leaves, tailgate panels, and other large-surface-area exterior parts.
22. A motor-vehicle-exterior part, in particular roof modules, engine hoods, wheel surrounds, bumpers, door leaves, and tailgate panels, comprising moldings according to any of claims 1 to 14.